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Coin of the Month

JUDAEA CAPTA DENARIUS WITH TROPHY

The contemporary meaning of **trophy** as "something given in victory, especially when preserved or mounted as a memorial" is actually the secondary meaning according to Webster's! The primary meaning is "a memorial of an ancient Greek or Roman victory raised on the field of battle or a representation of same on a coin or medal." But what exactly is the object beneath which the dejected allegorical figure of Judaea is seated on the famous Judea Capta coins?

The ancient **tropaeum** was composed of captured enemy arms, set up on the spot where the conquered enemy had turned to flight. The numismatic representation shows various pieces of armor suspended from the stump of a tree. A helmet crowns the trophy; also to be seen are shields, lorica (chest covering), and greaves (leg protection). The shields and lorica were generally made of leather, while the greaves were made from metal which was embossed with various designs.

The silver denarius struck by Emperor Vespasian at the Rome Mint showing Judaea beneath a trophy is probably the most common of the extensive Judaea Capta series, however it is much prized in high grade and has recent sales records up to \$2000 in Superb condition.

Thanks to Dr. Robert Webber for the excellent slide.



Enlargement of denarius shows trophy with, from top to bottom: helmet, two shields, chest armor, pair of leg armor, and two more shields on the ground.



Details of a trophy are shown on this carved relief of Augustus Caesar.

STARTLING DISCOVERY OF COIN IMAGES ON SHROUD OF TURIN

By Dr. Eric Jumper, Dr. John Jackson, and Kenneth Stevenson, Jr.

Twentieth Century computer technology combined with a mysterious Fourteenth Century religious relic has produced an unusual discovery... the possibility that coins were placed on the eyes of the deceased (Jesus?) and that they may be identifiable! While your editor indicates in the following article "Crucifixion Year Coins," that the coins impressed on the shroud could not have been the type issued by Pontius Pilate with the augur's wand, the coins could be any one of those minted in Judaea before the crucifixion.

This timely article is reprinted through the permission of **The Numismatist**, official journal of the American Numismatic Association, P.O. Box 2366, Colorado Springs, Co. 80903, for which we sincerely thank the editor Neil Harris and the authors. The Shroud of Turin is now on public display in the Vatican, and there is sure to be much more written about it in the near future.

The Mystery Unfolds

The documented itinerary of the cloth we know today as the Shroud of Turin goes back to the 1350's where it suddenly appeared in the family of Geoffrey de Charny, a French Knight of Lirey. How it arrived there and from whence it came remains a mystery even today, although British historian Ian Wilson has done a fine job of reconstructing a history for it back to Palestine at the time of Christ.¹ From the time of its appearance in Lirey through its stay in Chambéry, France (where a tragic fire left the scars visible today) and to its present location in Turin, Italy, the Shroud has had a rather large following of believers who thought the Shroud authentic. These believers, however, were far outnumbered by those who thought the Shroud simply a clever forgery by a misguided, albeit well intentioned, medieval artist...that is until 1898.

In that year an Italian photographer, Secunda Pia, a resident of Turin, was commissioned by Church authorities to photograph the Shroud for the first time in its history. Using large glass plates, Pia exposed his emulsion to the Shroud and returned home to his photographic facilities to begin the long developing process. Under the red light of his dark room, Pia watched with astonishment as faint images began to emerge from the otherwise black plates. He was witnessing the first of many revelations the Shroud had in store for the 20th century: on what should have been a negative with the usual distorted images appeared a perfect positive image.

Pia's discovery made headlines around the world, and quite naturally the sceptical scientific community became interested in these most unusual photographs. A commission of scientists headed by Yves Delage began an intensive study of the Pia plates in an attempt to answer three basic questions: 1) Could the Shroud be 2000 years old? 2) Was the image in fact the image of a human body? and 3) Could the image on the cloth be that of Jesus of Nazareth?

Delage reported the findings of the commission to the French Academy of Sciences in 1902. Summarized, the results of the study concluded that the Shroud could in fact be 2000 years old; the image must have been made by a dead human body—death by crucifixion; and finally, because of the phenomenal agreement with the gospel accounts of the passion and death, the image must have been made by the dead body of the historical figure, Jesus of Nazareth, as it lay in the tomb.

This statement by reputable scientists, the best in their fields, is a haunting one even today. Because of the unusual nature of the image on the cloth, one which is an anomaly, men of learning have asked the inevitable question, "How was the image formed?" Paul Vignon, a member of Delage's commission, made many observations about the characteristics of the image, the most important being that the image seemed to be present even where the cloth could not have been in contact with the body. After investigating many possible causes for the image, Vignon decided that the process must have been the vaporization of body excretions. Through a diffusion process, these vapors eventually made contact with the cloth and stained on the image visible today. Modern science, however, has great reason to doubt this process as the one involved.

Modern Revelations

During this century, men of science, history, and medicine have built on the original observations and comments of Delage's commission. Many of the theories and findings of these years can be found in the now classic work of Dr. Pierre Barbet, *A Doctor at Calvary*.² Because of the availability of so many books on the subject (see, for example, footnotes 3 and 4), discussion here will be limited to the startling discoveries made in the 1970's.

In 1969, discussions in Turin turned to a possible television exposition to be aired sometime in the early 70's. It had



The Shroud of Turin: The front image in negative showing the "positive" image first covered by Secunda Pia in 1898.

been 36 years since the last exposition of the Shroud and the Turin authorities felt that the largest possible audience could be reached through the television media. The biggest concern of the authorities, however, was whether the powerful lights necessary for such an exposition would damage the Shroud. To answer this question, the Shroud was taken out of its reliquary and tests were performed to determine the effects of bright lights on the cloth.

As it turns out, these tests were not the only ones conducted at that time. The Turin authorities had commissioned a group of scientists to perform certain tests on the Shroud to see if any new information could be found. The group commissioned was somewhat disorganized and unprepared to examine the cloth, but nevertheless performed a few tests to see if certain stains on the cloth were made by human blood. These tests, unfortunately, proved inconclusive.

As a result of the 1969 tests, a decision was made to go ahead with the television exposition and it was scheduled for 1973. During the exposition, the group who examined the cloth in 1969 again viewed the cloth. Even though their report, finally published in 1975 in Italian and translated to English in late 1976, left a very dissatisfied feeling in the minds of most interested scientists, new informa-

tion had, indeed, been discovered. For instance, pollen fragments were found on the Shroud which showed the cloth had been exposed to the open air in Palestine at some time in its history. (In its known history the Shroud has never been outside France and Italy.) Interestingly, the image, thought for years to permeate the cloth, was found to exist *only* on the *surface* fibers of the *surface* threads. And finally, color photographs of the cloth were made available for the first time. It is important to note that because of these new findings and the work done since 1974, it appears very unlikely that the images could have been formed by an organic stain.

Authors' Research

The authors of this article have been engaged in a spare-time research program on the Shroud since 1974, and like Delage's Commission, have drawn all observations from photographs of the Shroud images. It is surprising just how much information is available from the photographic record which started with Secunda Pia. Though a variety of studies has been conducted, discussion here will be confined to those observations which led to the numismatic mystery of the Shroud.

We have concentrated most of our efforts on investigating Vignon's observation that the image seemed to be present even where the cloth could not have touched the body. In this regard, we constructed a full scale cloth model of the Shroud in an attempt to see if there was in fact a mathematically quantifiable relationship between the image intensities on the Shroud and the distances it must have been from the body (if it was a body which the Shroud enfolded). Having this model, we were able to carefully wrap human subjects inside the cloth in such a way as to match all body features in the image above the corresponding anatomy of the subject. Having the subject properly enshrouded, it was a simple matter to measure the distance various portions of the image on the cloth were from the subject beneath. Using a microdensitometer (a machine capable of accurately measuring image intensities on photographic transparencies), we measured the density of corresponding locations on the image by scanning photographic plates of the Shroud which were taken in 1933. The results of this experiment surprisingly produced a mathematical correlation of the image. We had, for the first time, shown hard evidence that Vignon's observation was a physical fact and in so doing showed that our assumption, that a body enshrouded in the cloth had produced the image on it, was scientifically provable.

Our first attempts at using these results would not have been nearly as useful were it not for our fortunate meeting with a fellow scientist, Bill Mottern. Mottern introduced us to a recently developed instrument known as Inter-

pretation Systems, VP-8 Image Analyzer. The results of using this machine made the distance relationship vividly demonstrable. One of the functions of the versatile VP-8 is to plot on an x-y-z display a mathematical "brightness" surface which displays image intensity in relief. The result is what appears to be a three-dimensional image (similar to what is referred to in Mechanical Drawing as an isometric) displayed on a television-like screen.

The result of one experiment, surprisingly, revealed objects resting on the eyes—objects which resembled small disks or "buttons."

We were able to conclude that their thickness was approximately 1-5 mm, and the average diameter of the objects was approximately 14mm. Further, the objects were decidedly flat, which can be shown from a contour map of the densities of the face. In summary, then, the objects are circular, about the same size, and flat.

In an attempt to identify the kinds of things that might well be on the eyes of a dead man, we consulted Jewish burial customs prevalent at the time of Jesus and found that it was customary for the Jews to place objects (potsherds—pottery fragments—or coins) over the eyes of their dead.⁷ It is interesting that this custom was allowed even on the Sabbath when washing was not. (Notably, the body of the man of the Shroud was uncleaned; if this is in fact the body of Jesus, it may not have been washed because of the onset of the Sabbath noted in John.⁸ Washing of the body was considered work while placing objects on the eyes apparently prevented work. This practice kept the eyes from opening due to rigor mortis

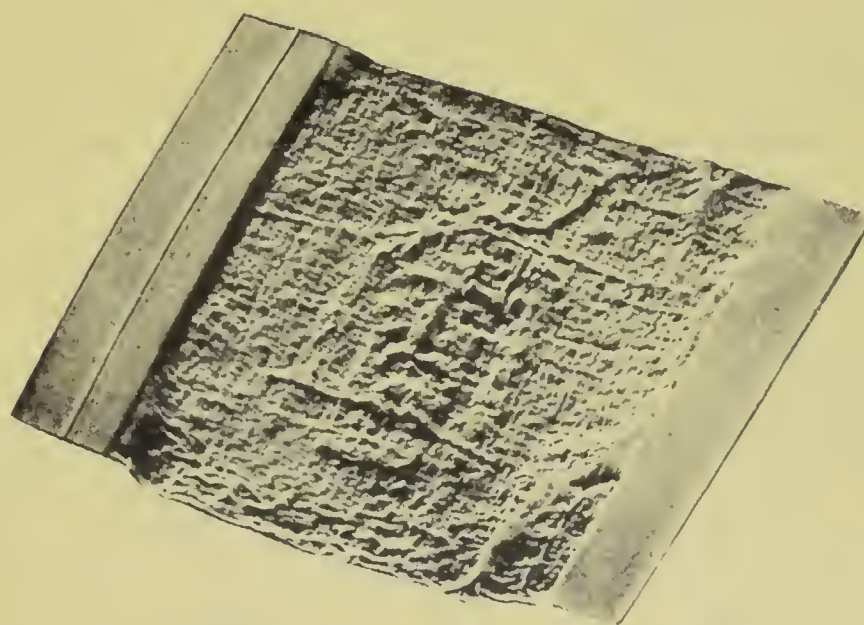
and therefore negated the necessity of closing the eyes, which was considered work.)

Could these objects then be coins? If the two alternatives are either coins or potsherds, it's more likely that in such an apparently hurried burial, those present would probably have coins rather than pottery to break. What coins then would be the most likely candidates?

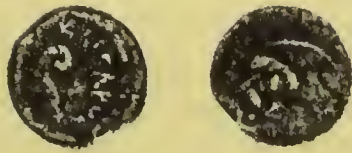
When we mentioned our coin theory to friend Ian Wilson, he, being somewhat of a coin buff, immediately looked into what coins might have been used if the Shroud was genuine. The result of his study produced the possibility of a Jewish bronze lepton of Pontius Pilate minted from 29-31 AD. One of Ian's observations was that this coin was acceptable as a temple offering (because it lacked the image of Caesar) and was therefore likely to be in the possession of orthodox Jews. Rather amazingly, the size and shape of the lepton are perfect. Additionally, the observation of what appears to be a backward question mark on the object on the left eye seems to correspond to the striking (Augur's wand) on a lepton! Intriguing points, but to date still inconclusive.

Where Do We Go From Here?

Since the Shroud itself offers so many questions that need to be answered, the matter of these "coins" may, at first, seem to be quite trivial. But is it really? If, for example, the disk-like images were positively found to have been caused by coins minted in 29-31 AD, wouldn't that then date the image and the Shroud? This is certainly an exciting possibility and one which, for us, warrants serious consideration upon examination of the Shroud first hand in the fall.



Three-dimensional image of the face with the relief adjusted to call attention to the button-like objects on the eyes, the object on the right eye being the most noticeable.



"Positive" image of the Shroud face with a Judea bronze lepton of Pontius Pilate superimposed

The many tests we intend to perform include exacting photographic studies under controlled scientific conditions, and x-ray fluorescence analysis of the images. The photographs will be used for sophisticated image analysis and enhancement studies, while the x-ray fluorescence tests are designed to discover the atomic composition of the image.

With the photographic work, we hope to obtain very fine quality pictures which, among other things, can be used to take much of the noise out of the image, noise present, for example, from the weave pattern of the cloth. If we are successful, perhaps the vague suggestions of structure on the disks can be identified positively and matched with known coin candidates.

As mentioned before, the origin of the image is no longer thought to be organic. Many reputable scientists now feel the source of the image, however unbelievable, seems likely to be a thermal discoloration—a scorch, if you will.⁹ Could the energy necessary to cause such a scorch have been sufficient to glean off a few metal particles from a "coin" and transfer them to the cloth? Well, whether this happened or not, we would like to include in our x-ray fluorescence testing scans over the eyes to determine if there are any deposits of various metal particles to suggest the presence of coins.

Of course, to do a proper job, we should know what kinds of coins we might be able to match up. Is the lepton the strongest candidate? What other coins might be as likely or more likely? What is the metallic composition of these candidates?

Footnotes

- ¹Ian Wilson, *The Shroud of Turin* (New York: Doubleday and Company, Inc., 1978).
- ²Pierre Barbet, *A Doctor at Calvary* (New York: Image Books, 1953).
- ³Peter Rinaldi, *It is the Lord?* (New York: Vantage Press, 1972).
- ⁴Thomas Humber, *The Sacred Shroud* (New York: Pocket Books, 1978).
- ⁵John P. Jackson, Eric J. Jumper, Bill Mottern, and Kenneth E. Stevenson, "The Three Dimensional Image on Jesus' Burial Cloth," *Proceedings of the 1977 United States Conference of Research on the Shroud of Turin*, (Bronx, NY: Holy Shroud Guild, 1977), p. 74.
- ⁶Eric Jumper, John Jackson, and Don Devan, "Computer Related Investigations of the Holy Shroud," *Proceedings of the 1977 United States Conference of Research on the Shroud of Turin* (New York: Holy Shroud Guild, 1977), p. 197.
- ⁷A. P. Bender, "Beliefs, Rites, and Customs of the Jews Connected with Death, Burial, and Mourning," *Jewish Quarterly Review*, 7 (1894-1895), pp. 101, 254.
- ⁸John 19:42.
- ⁹R. N. Rogers, "Chemical Considerations Concerning the Shroud of Turin," *Proceedings of the 1977 United States Conference of Research on the Shroud of Turin* (New York: Holy Shroud Guild, 1977), p. 131.

Editor's Note

For those interested in pursuing the subject of the Shroud further, the address of the Holy Shroud Guild is 294 E. 150 Street, Bronx, NY 10451

The article below is reprinted from the May 17, 1977 edition of WORLD COIN NEWS.

CRUCIFIXION YEAR COINS

by Mel Wacks NLG



Which of these coins of the Procurator Pontius Pilate was issued in the year of the crucifixion? The simpulum type (left) is dated in the 16th year of the reign of Tiberius (29/30 AD), the lituus type (right) was issued in the next year.

This column was written in response to a question submitted by Biblical Numismatic Society member Ed Simmons.

"I was interested to see that you consider the lituus coin of Pontius Pilate to be that of the year of the Crucifixion," notes Ed. "Other authorities, as you are well aware, credit that distinction to the coin bearing the simpulum."

It's a good question, and here's the answer.

Jesus died shortly after Passover (in the spring) in the year 30 AD. The coins of the Procurator Pontius Pilate were dated according to the Regnal year of the Roman Emperor Tiberius. Tiberius, adopted son of Augustus Caesar, assumed the throne upon the death of Augustus in August, 14 AD.

Thus the years of Tiberius would have to be reckoned from August, rather than the normal January of the Julian calendar. So the first year of Tiberius was August, 14 AD to July, 15 AD; the second year, August, 15 AD to July, 16 AD and so on. The time of the Crucifixion would have fallen within the latter half of the 16th year of Tiberius' rule.

There is one small bronze lepton of Pontius Pilate dated in the 16th regnal year. This "mite" features three ears of barley and a simpulum (ceremonial ladle). The inscription honors the Emperor's mother, Julia, and this issue likely came to an abrupt end with her death in the year 29. Since the next coin of Pilate is dated in the 17th year of Tiberius (that is, after August, 30 AD), evidently no coins were being minted in Judaea at the time of the Crucifixion. However, the simpulum coin is dated in the same regnal year as Jesus' death, and the next coin—of the lituus type—was likely issued in the same Julian year (e.g. August through December, 30 AD).

So your choice of the coin struck in the year of the crucifixion depends on your definition of "year."